

In the Claims:

Please add new claims 12 and 13 as follows:

1. (Original) A head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to a disk, comprising:

a front rail formed on said disk opposing surface at a longitudinal position adjacent to said air inlet end, said front rail having a flat air bearing surface for generating a flying force during rotation of said disk;

a pair of rear rails formed on said disk opposing surface at a longitudinal position adjacent to said air outlet end, each of said rear rails having a flat air bearing surface for generating a flying force during rotation of said disk;

a groove formed downstream of said front rail for generating a negative pressure by expanding air once compressed at said front rail;

a transducer formed near said air outlet end at a transverse position where one of said rear rails is formed; and

a plurality of pads formed on said front rail and at least one of said rear rails;

each of said pads having an inclined upper end surface with a given inclination angle such that the upstream end of said inclined upper end surface is higher in level than the downstream end thereof.

2. (Original) A head slider according to claim 1, wherein said given inclination angle is less than or equal to a pitch angle in flying said slider.

3. (Original) A head slider according to claim 1, wherein each of said front rail and said rear rails has a step surface adjacent to said corresponding air bearing surface and lower in level than said corresponding air bearing surface;  
each of said pads being formed on said step surface.

4. (Original) A head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to a disk, comprising:

a front rail formed on said disk opposing surface at a longitudinal position adjacent to said air inlet end, said front rail having a flat air bearing surface for generating a flying force during rotation of said disk;

a pair of rear rails formed on said disk opposing surface at a longitudinal position adjacent to said air outlet end, each of said rear rails having a flat air bearing surface for generating a flying force during rotation of said disk;

a groove formed downstream of said front rail for generating a negative pressure by expanding air once compressed at said front rail;

a transducer formed near said air outlet end at a transverse position where one of said rear rails is formed; and

a plurality of pads formed on said front rail and at least one of said rear rails;

each of said pads including a base pad having a first sectional area and an auxiliary pad formed on said base pad, said auxiliary pad having a second sectional area smaller than said first sectional area.

5. (Original) A head slider according to claim 4, wherein the angle formed between a horizontal plane and a straight line connecting the downstream end of the upper end surface of said base pad and the downstream end of the upper end surface of said auxiliary pad is less than or equal to a pitch angle in flying said slider.

6. (Original) A head slider according to claim 4, wherein each of said front rail and said rear rails has a step surface adjacent to said corresponding air bearing surface and lower in level than said corresponding air bearing surface;

each of said pads being formed on said step surface.

7. (Original) A head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to a disk, comprising:

a front rail formed on said disk opposing surface at a longitudinal position adjacent to said air inlet end, said front rail having a flat air bearing surface for generating a flying force during rotation of said disk;

a pair of rear rails formed on said disk opposing surface at a longitudinal position adjacent to said air outlet end, each of said rear rails having a flat air bearing surface for generating a flying force during rotation of said disk;

a groove formed downstream of said front rail for generating a negative pressure by expanding air once compressed at said front rail;

a transducer formed near said air outlet end at a transverse position where one of said rear rails is formed;

a plurality of pads formed on said front rail and at least one of said rear rails; and

a plurality of auxiliary pads formed adjacent to said pads on the upstream side thereof, respectively;

each of said auxiliary pads being higher in level than said pad adjacent thereto.

8. (Original) A head slider according to claim 7, wherein each of said auxiliary pads has a sectional area smaller than that of each adjacent pad, and the angle formed between a horizontal plane and a straight line connecting the downstream end of the upper end surface of each auxiliary pad and the downstream end of the upper end surface of each adjacent pad is less than or equal to a pitch angle in flying said slider.

9. (Original) A head slider according to claim 7, wherein each of said front rail and said rear rails has a step surface adjacent to said corresponding air bearing surface and lower in level than said corresponding air bearing surface;

each of said pads and said auxiliary pads being formed on said step surface.

10. (Original) A head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to a disk, comprising:

a pair of rails formed on said disk opposing surface, each of said rails having a flat air bearing surface for generating a flying force during rotation of said disk;

a groove formed between said rails for generating a negative pressure by expanding air once compressed at said air inlet end;

a transducer formed near said air outlet end at a transverse position where one of said rails is formed; and

a plurality of pads formed on said air bearing surfaces of said rails;

each of said pads having an inclined upper end surface with a given inclination angle such that the upstream end of said inclined upper end surface is higher in level than the downstream end thereof.

11. (Original) A head slider according to claim 10, wherein said given inclination angle is less than or equal to a pitch angle in flying said slider.

12. (New) A disk drive comprising:

a housing having a base;

a disk rotatably mounted in said housing and having a plurality of tracks;

a head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to said disk; and

an actuator for moving said head slider across said tracks of said disk;  
said actuator comprising:  
an actuator arm rotatably mounted on said base;  
a suspension fixed at a base end portion thereof to a front end portion of  
said actuator arm; and

said head slider mounted on a front end portion of said suspension;  
said head slider comprising:  
a front rail formed on said disk opposing surface at a longitudinal  
position adjacent to said air inlet end, said front rail having a flat air bearing surface for  
generating a flying force during rotation of said disk;

a pair of rear rails formed on said disk opposing surface at a longitudinal  
position adjacent to said air outlet end, each of said rear rails having a flat air bearing surface  
for generating a flying force during rotation of said disk;

a groove formed downstream of said front rail for generating a negative  
pressure by expanding air once compressed at said front rail;

a transducer formed near said air outlet end at a transverse position  
where one of said rear rails is formed; and

a plurality of pads formed on said front rail and at least one of said rear  
rails;

each of said pads having an inclined upper end surface with a given  
inclination angle such that the upstream end of said inclined upper end surface is higher in  
level than the downstream end thereof.

13. (New) A disk drive comprising:

- a housing having a base;
- a disk rotatably mounted in said housing and having a plurality of tracks;
- a head slider having an air inlet end, an air outlet end, and a disk opposing surface opposed to said disk; and
- an actuator for moving said head slider across said tracks of said disk;

said actuator comprising:

- an actuator arm rotatably mounted on said base;
- a suspension fixed at a base end portion thereof to a front end portion of said actuator arm; and
- said head slider mounted on a front end portion of said suspension;

said head slider comprising:

- a front rail formed on said disk opposing surface at a longitudinal position adjacent to said air inlet end, said front rail having a flat air bearing surface for generating a flying force during rotation of said disk;
- a pair of rear rails formed on said disk opposing surface at a longitudinal position adjacent to said air outlet end, each of said rear rails having a flat air bearing surface for generating a flying force during rotation of said disk;
- a groove formed downstream of said front rail for generating a negative pressure by expanding air once compressed at said front rail;
- a transducer formed near said air outlet end at a transverse position where one of said rear rails is formed; and

a plurality of pads formed on said front rail and at least one of said rear rails;

each of said pads having a base pad having a first sectional area and an auxiliary pad formed on said base pad, said auxiliary pad having a second sectional area smaller than said first sectional area.

Respectfully submitted,

GREER, BURNS & CRAIN, LTD.

By



Patrick G. Burns

Registration No. 29,367

January 17, 2005

300 South Wacker Drive  
Suite 2500  
Chicago, Illinois 60606  
Telephone: 312.360.0080  
Facsimile: 312.360.9315

Customer No. 24978

P:\DOCS\3531\68536\809457.DOC